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10/736,089	12/15/2003	Ajith K. Kumar	132250NP/GETS 5314.1	3281

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SENNIGER POWERS
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER	
MANCHO, RONNIE M	
ART UNIT	**PAPER NUMBER**
3663	

NOTIFICATION DATE	DELIVERY MODE
09/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspatents@senniger.com

Office Action Summary	Application No.	Applicant(s)	
	10/736,089	KUMAR ET AL.	
	Examiner	Art Unit	
	Ronnie Mancho	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,8,14-22,26,50,52-58,62 and 76* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3, 8, 14-22, 26, 50, 52-58, 62, 76* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 8 recites, "the generated data is generated by the first processor". On the contrary independent claim 1 calls for "EACH processor ....generating data". This is new matter because the original disclosure does not suggest or disclose the limitations.

3. Claim 8 is are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 8 recites, "the generated data is generated by the first processor". On the contrary independent claim 1 calls for "EACH processor ....generating data". Therefore the limitations in claim 8 are not enabled.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 22, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 22, it is not clear what all is meant and encompassed by the phrase, "compliance of the second level with the system optimization parameter". The limitation is indefinite. Applicant does not provide the requisite degree by which one skilled in the art can ascertain the limitation.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 8, 14-22, 26, 50, 52-58, 62, 76 rejected under 35 U.S.C. 102(b) as being anticipated by Polivka et al (5828979)

Regarding claim 1, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) disclose a system for management of a multi-level railway system and its operational components, the railway system comprising:

a first processor 200 associated with a railroad infrastructure level configured to control an operation of a railroad infrastructure (col. 4, lines 39-67);

a second processor 210 associated with a railroad track network level configured to control an operation of a railroad track network (col. 4, lines 64-67), wherein the railroad track network level is a sub-level of said railroad infrastructure level;

a third processor 206 associated with a train level configured to control an operation of a train (col. 4, lines 56-61), wherein the train level is a sub-level of said railroad track network level;

a fourth processor 204 associated with a consist level configured to control an operation of a consist of a train (col. 5, lines 46-55), wherein the consist level is a sub-level of said train level; and

a fifth processor 208 associated with a locomotive level configured to control an operation of a locomotive (col. 6, lines 36-50), wherein the locomotive level is a sub-level of said consist level;

each processor associated with each level receiving performance data and input data defining operational characteristics for associated level wherein each processor is responsive to the received input data to generate output instructions, and wherein each processor controls the operation in the associated level in accordance with the generated output (fig. 2-11; col. 2, lines 39-67; col. 5, lines 46-67; col. 6, lines 36-67, etc); and

each processor further generating data and providing the generated data to a processor associated with at least one other level, and wherein the processor associated with the at least one other level is responsive to the received generated data to control an operation within the at least one other level such that said first, second, third, fourth, and fifth processors control operation of the multi-level railway system across the railroad infrastructure level, the railroad track network

level, the train level, the consists level, and the locomotive level of the multi-level railway system as a function of the generated data (col. 5, lines 46 to col. 7, lines 60; col. 8, lines 47-64).

Regarding claim 3, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) disclose the system of claim 1 wherein the input data received by the first processor associated with the railroad infrastructure level includes:

railroad infrastructure data;

railroad track network data,

train data; and

wherein the first processor controls the operation of the railroad infrastructure within the railroad infrastructure level based on the received infrastructure data, the received railroad track network data, and the received train data.

Regarding claim 8, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) disclose the system of claim 1, wherein the output instructions generated by the first processor associated with the railroad infrastructure includes operating commands, and wherein the operating commands generated by the first processor includes operating commands to the second processor associated with the railroad track network level and commands to the third processor associated with the a train level.

Regarding claim 14, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose a multi-level system for management of a railway system and its operational components, the railway system comprising:

a first level (col. 4, lines 39-67; col. 5, lines 1-64) configured to control an operation within the first level, said first level including first level operational parameters defining operational characteristics and data of the first level; and

a second level (col. 4, lines 39-67; col. 5, lines 1-64) configured to control an operation within the second level, said second level including second level operational parameters defining the operational characteristic and data of the second level over time, wherein the second level is a sub-level of said first level;

said first level providing the second level with the first level operational parameters (col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64), and the second level providing the first level (see signal flow, figs. 2, 4-14) with the second level operational parameters; and

said controlling the operation within the first level and said controlling the operation within the second level each being a function of the first and second level operational parameters (col. 4, lines 39-67; col. 5, lines 1-64).

Regarding claim 15, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) the system of claim 14 wherein the first level operational parameter and second level operational parameter are indicative of fuel usage in the railway system.

Regarding claim 16, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) the system of claim 14 wherein the first level operational parameter and second level operational parameter are indicative of an economic valuation of the time of delivery of cargo carried in the railway system.

Regarding claim 17, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) the system of claim 14 wherein the operational parameters are provided from one level to the other at predetermined intervals.

Regarding claim 18, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) the system of claim 14 wherein the operational parameters are indicative of predetermined changes in conditions.

Regarding claim 19, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) system of claim 18 wherein the operational parameters are indicative of a rate of change in the conditions.

Regarding claim 20, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 19 wherein the rate of change is with respect to time (col. 7, lines 29-49).

Regarding claim 21, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 19 wherein the rate of change is the change in one condition with respect to another (col. 7, lines 39-67).

Regarding claim 22, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 14 wherein compliance of the second level with the system optimization parameter is communicated periodically from the second level to the first level for adjusting the first and second level operational parameters based thereon.

Regarding claim 26, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 22 wherein controlling the operation within the first level and controlling the operation within the second level includes identifying operating constraints and data at one of the first and second level and

communicating the operating constraints and data to another of the first and second level to improve performance of operation at the another level.

Regarding claim 50, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose a system for management of a railway system and its operational components, the railway system comprising:

a first level (col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64) including first level operational parameters defining operational characteristics and data of the first level; and

a second level (col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64) including second level operational parameters configured to control an operation within the second level as a function of the first level operational parameters and second level operational parameters and wherein the second level operational parameters are indicative of changes in operational characteristics and data of the second level over time (col. 7, lines 3-67; col. 8, lines 1-67), wherein the second level is a sub-level of said first level; and

said second level providing the first level with second level operational parameters (see signal exchange, figs. 2, 4-14), and wherein said first level determines the first operational parameters as a function of the provided second level operational parameters..

Regarding claim 52, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 51 wherein the first and second level operational parameters are indicative of a change in fuel usage in the railway system.

Regarding claim 53, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 51 wherein the

first and second level operational parameters are indicative of a change in an economic valuation of the time of delivery of cargo carried in the railway system.

Regarding claim 54, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 50 wherein the second level operational parameters are provided from the second level to the first level at predetermined intervals.

Regarding claim 55, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 50 wherein the second level is a portion of the first level.

Regarding claim 56, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 51 wherein the system operational parameter is indicative of a rate of change in second level operational parameters.

Regarding claim 57, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 56 wherein the rate of change is with respect to time.

Regarding claim 58, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 56 wherein the rate of change is the change in one condition with respect to another.

Regarding claim 62, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 50 wherein the

first level monitors whether or not the optimized second level operation is within predetermined limits.

Regarding claim 76, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67; col. 5, lines 1-64; col. 6, lines 36-64; col. 7, lines 3-67; col. 8, lines 1-67) disclose the system of claim 1, wherein the generated data comprises at least one of: an operating command, an operational limitation, or information associated with the level generating said data.

Response to Arguments

7. Applicant's arguments filed 8/8/07 have been fully considered but they are all not persuasive.

Unless repeated herein, the 112 rejections in the prior office actions have been withdrawn in view of applicant's amendments.

The applicant is arguing that the prior art disclose the limitations in the claims. The examiner disagrees. The applicant is making references to sections that are in contrast to the sections recited by the examiner. It is believed that the prior art, Polivka et al (figs. 2, 4-14; col. 4, lines 39-67) anticipate a system for management of a multi-level railway system and its operational components, the railway system comprising:

a first processor 200 associated with a railroad infrastructure level configured to control an operation of a railroad infrastructure (col. 4, lines 39-67);

a second processor 210 associated with a railroad track network level configured to control an operation of a railroad track network (col. 4, lines 64-67), wherein the railroad track network level is a sub-level of said railroad infrastructure level;

a third processor 206 associated with a train level configured to control an operation of a train (col. 4, lines 56-61), wherein the train level is a sub-level of said railroad track network level;

a fourth processor 204 associated with a consist level configured to control an operation of a consist of a train (col. 5, lines 46-55), wherein the consist level is a sub-level of said train level; and

a fifth processor 208 associated with a locomotive level configured to control an operation of a locomotive (col. 6, lines 36-50), wherein the locomotive level is a sub-level of said consist level;

each processor associated with each level receiving performance data and input data defining operational characteristics for associated level wherein each processor is responsive to the received input data to generate output instructions, and wherein each processor controls the operation in the associated level in accordance with the generated output (fig. 2-11; col. 2, lines 39-67; col. 5, lines 46-67; col. 6, lines 36-67, etc); and

each processor further generating data and providing the generated data to a processor associated with at least one other level, and wherein the processor associated with the at least one other level is responsive to the received generated data to control an operation within the at least one other level such that said first, second, third, fourth, and fifth processors control operation of the multi-level railway system across the railroad infrastructure level, the railroad track network level, the train level, the consists level, and the locomotive level of the multi-level railway system as a function of the generated data (col. 5, lines 46 to col. 7, lines 60; col. 8, lines 47-64).

These above cited sections have been ignored by the applicant as they were not addressed in applicant's remarks.

Applicant is making reference to limitations such as "providing data from the a train back to the system wide planner", "update the course schedule", "fueling" "running out of fuel" etc. These limitations are not in the claims. Applicant's arguments are therefore not on point.

The prior art has a main processor that receive data from and controls a plurality of other processors associated with different levels. Not once did applicant address any of the recited columns and lines and figures of the prior art recited by the examiner.

It is further noted that the arguments are drawn to function or method limitations in an apparatus claim. The functional or method limitations do not distinguish the structural limitations of the invention from the prior art. The examiner has shown how and in what manner the system of POLIVKA is capable of meeting applicant's claim language. See MPEP 2114 and 2115.

It is believed that the rejections are proper and thus stand.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronnie Mancho whose telephone number is 571-272-6984. The examiner can normally be reached on Mon-Thurs: 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ronnie Mancho

Examiner
Art Unit 3663

9/1/2007

JACK KEITH
SUPERVISORY PATENT EXAMINER